



[4910-13-P]

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2017-0127; Product Identifier 2016-NM-161-AD]

RIN 2120-AA64

Airworthiness Directives; The Boeing Company Airplanes

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Supplemental notice of proposed rulemaking (SNPRM); reopening of comment period.

SUMMARY: We are revising an earlier proposal for all The Boeing Company Model 737-600, -700, -700C, -800, -900, and -900ER series airplanes; Model 757 airplanes; and Model 767 airplanes. This action revises the notice of proposed rulemaking (NPRM) by adding Model 737-8 airplanes and future Model 737 airplanes to the applicability. We are proposing this airworthiness directive (AD) to address the unsafe condition on these products. Since these actions impose an additional burden over those proposed in the NPRM, we are reopening the comment period to allow the public the chance to comment on these changes.

DATES: The comment period for the NPRM published in the Federal Register on March 9, 2017 (82 FR 13073), is reopened.

We must receive comments on this SNPRM by [INSERT DATE 45 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

ADDRESSES: You may send comments, using the procedures found in 14 CFR 11.43 and 11.45, by any of the following methods:

- Federal eRulemaking Portal: Go to <http://www.regulations.gov>. Follow the instructions for submitting comments.

- Fax: 202-493-2251.

- Mail: U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE., Washington, DC 20590.

- Hand Delivery: U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE., Washington, DC 20590, between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.

For service information identified in this SNPRM, contact Boeing Commercial Airplanes, Attention: Contractual & Data Services (C&DS), 2600 Westminister Blvd., MC 110-SK57, Seal Beach, CA 90740-5600; telephone: 562-797-1717; Internet: <https://www.myboeingfleet.com>. You may view this service information at the FAA, Transport Standards Branch, 2200 South 216th St., Des Moines, WA. For information on the availability of this material at the FAA, call 206-231-3195. It is also available on the Internet at <http://www.regulations.gov> by searching for and locating Docket No. FAA-2017-0127.

Examining the AD Docket

You may examine the AD docket on the Internet at <http://www.regulations.gov> by searching for and locating Docket No. FAA-2017-0127; or in person at the Docket Management Facility between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this SNPRM, the regulatory evaluation, any comments received, and other information. The street address for the Docket Office (phone: 800-647-5527) is in the ADDRESSES section. Comments will be available in the AD docket shortly after receipt.

FOR FURTHER INFORMATION CONTACT: Tak Kobayashi, Aerospace Engineer, Propulsion Section, FAA, Seattle ACO Branch, 2200 South 216th St., Des Moines, WA 98198; phone and fax: 206-231-3553; email: Takahisa.Kobayashi@faa.gov.

SUPPLEMENTARY INFORMATION:

Comments Invited

We invite you to send any written relevant data, views, or arguments about this proposal. Send your comments to an address listed under the ADDRESSES section. Include “Docket No. FAA-2017-0127; Product Identifier 2016-NM-161-AD” at the beginning of your comments. We specifically invite comments on the overall regulatory, economic, environmental, and energy aspects of this SNPRM. We will consider all comments received by the closing date and may amend this SNPRM because of those comments.

We will post all comments we receive, without change, to <http://www.regulations.gov>, including any personal information you provide. We will also post a report summarizing each substantive verbal contact we receive about this SNPRM.

Discussion

We issued an NPRM to amend 14 CFR part 39 by adding an AD that would apply to all The Boeing Company Model 737-600, -700, -700C, -800, -900, and -900ER series airplanes; Model 757 airplanes; and Model 767 airplanes. The NPRM published in the Federal Register on March 9, 2017 (82 FR 13073). The NPRM was prompted by reports of latently failed motor-operated valve (MOV) actuators of the fuel shutoff valves. The NPRM proposed to require replacing certain MOV actuators of the fuel shutoff valves for the left and right engines (on all airplanes) and of the auxiliary power unit (APU) fuel shutoff valve (on Model 757 and Model 767 airplanes); and revising the maintenance or

inspection program, as applicable, to incorporate certain airworthiness limitations (AWLs).

Actions Since the NPRM was Issued

Since we issued the NPRM, we have determined that The Boeing Company Model 737-8 series airplanes and future Model 737 airplanes are also subject to the unsafe condition, and therefore it is necessary to add these airplanes to the applicability.

Model 737-8 airplanes are delivered with the MOV actuator having part number (P/N) MA30A1017 (Boeing P/N S343T003-76) as the type design configuration. This is the latest MOV actuator part number currently available, and that part number addresses the unsafe condition identified in this SNPRM. Subsequent future Model 737 airplanes are expected to be certified and delivered with the same MOV actuator part number. For those future Model 737 airplanes, installation of the MOV actuator having any earlier part number would not be part of the type design configuration; such installation will therefore not be allowed. However, installation of an MOV actuator having an earlier part number is functionally and physically possible for Model 737-8 airplanes and potentially for the future Model 737 airplanes, and such installation could occur in the field by using provisions in FAA Advisory Circular 120-77 or other means.

To avoid such installation that could result in an unsafe airplane configuration, this SNPRM proposes to require, for Model 737-8 airplanes and subsequent future Model 737 airplanes, incorporation of an AWL that would prohibit installation of the MOV actuator having earlier part numbers. Other than the parts installation prohibition, no maintenance action is associated with the new AWL specified in this proposed AD. Once the AWL is incorporated into an operator's maintenance or inspection program, as applicable, the operator is required to comply with the AWL as specified in 14 CFR 43.16 and 91.403(c). This new proposed AWL (to prohibit the installation of certain

parts) is also proposed for Boeing Model 737-600, -700, -700C, -800, -900, and -900ER series airplanes; Model 757 series airplanes; and Model 767 series airplanes.

Revised Service Information

Boeing has revised the service information specified in this SNPRM. We have revised this proposed AD to specify using the latest revisions as the appropriate source of service information and to credit the previous revisions, as follows:

Paragraphs (g)(2) and (h)(2) of this proposed AD specify Boeing Special Attention Service Bulletin 757-28-0138, Revision 1, dated June 19, 2017. Paragraph (n)(1) of this proposed AD specifies credit for Boeing Special Attention Service Bulletin 757-28-0138, dated May 18, 2016.

Paragraphs (i)(2)(i), (i)(2)(ii), and (i)(2)(iii) of this proposed AD specify Boeing 757 Maintenance Planning Data (MPD) Document, Section 9, Airworthiness Limitations (AWLs) and Certification Maintenance Requirements (CMRs), D622N001-9, Revision February 2017. Paragraph (n)(4) of this proposed AD specifies credit for Boeing 757 Maintenance Planning Data (MPD) Document, Section 9, Airworthiness Limitations (AWLs) and Certification Maintenance Requirements (CMRs), D622N001-9, Revision January 2016, or Revision July 2016.

Comments

We gave the public the opportunity to comment on the NPRM. The following presents the comments received on the NPRM and the FAA's response to each comment.

Request to Issue Three Separate ADs

United Airlines (UAL) requested that we issue three separate ADs, one each for Model 737 airplanes, Model 757 airplanes, and Model 767 airplanes, instead of one AD. UAL requested this revision to reduce complexity and avoid possible confusion.

We do not agree with UAL's request. We have decided to cover Model 737, Model 757, and Model 767 airplanes in this SNPRM. We consider that the level of

complexity of this SNPRM is reasonable and that the proposed actions are clearly defined. Additionally, to restructure the AD as requested, would unnecessarily delay the issuance of the final rule and mitigation of the unsafe condition. We have not changed this SNPRM regarding this issue.

Request to Justify Requirement to Install Latest MOV Actuator Part Number

Japan Airlines (JAL) noted that according to AD 2015-19-03, Amendment 39-18266 (80 FR 55527, September 16, 2015) (“AD 2015-19-03”), and AD 2015-21-09, Amendment 39-18302 (80 FR 65121, October 26, 2015) (“AD 2015-21-09”), MOV actuators P/N MA20A2027 and MA30A1001 that are repetitively inspected need not be replaced by P/N MA30A1017. JAL requested that we provide the reason for mandating the installation of the latest MOV actuator part number instead of allowing repetitive inspections. JAL stated that it has never experienced a failure of an MOV actuator, and it is therefore not necessary to mandate the replacement of MOV actuators with the latest type if the repetitive inspections of MOV actuators (required by the ADs referenced by JAL) are being accomplished daily or every 10 days.

We agree that clarification of the reason for the proposed installation is necessary. Three ADs were issued to correct latent failures of the MOV actuator for the left engine and right engine fuel shutoff valves and for certain airplanes, the auxiliary power unit (APU) fuel shutoff valve. Those ADs are AD 2015-21-10, Amendment 39-18303 (80 FR 65130, October 26, 2015) (“AD 2015-21-10”), AD 2015-21-09, and AD 2015-19-04, Amendment 39-18267 (80 FR 55505, September 16, 2015) (“AD 2015-19-04”). AD 2015-19-03 (referenced by the commenter) was superseded by AD 2015-21-10. AD 2015-21-10, AD 2015-21-09, and AD 2015-19-04 explained that the repetitive inspections required by the AWLs were considered to be an interim action to address the unsafe condition, and that we might consider additional rulemaking once the modification that would address the unsafe condition was developed. This proposed AD would require

replacement of the specific MOV actuator part numbers because the installation of the latest MOV actuator part number would result in a configuration that is fail safe, by eliminating latent MOV actuator failure modes that would leave the airplane one failure away from a potential incident or accident. Without this modification, affected airplanes have a potential of being dispatched with a failed MOV actuator. In the event of an engine or APU fire, such a dispatch configuration would allow certain fires to become uncontrollable. The AWL repetitive inspections only limit the time of exposure of the airplane configuration dispatched with a failed fuel shutoff means. Also, repetitive inspections have a potential of introducing human errors that could result in a failure to detect an MOV actuator failure or other issues. We have not changed this SNPRM regarding this issue.

Requests to Terminate Other ADs

Air Canada (ACN), All Nippon Airways (ANA), Delta Airlines (DAL), the Europe Aviation Safety Agency (EASA), FedEx Express (FedEx), Pegasus Airlines, UAL, and Southwest Airlines (SWA) requested that we revise the proposed AD (in the NPRM) to specify that the accomplishment of the proposed actions would terminate the requirements of AD 2015-19-04 (for Model 757 airplanes), AD 2015-21-09 (for Model 767 airplanes), and AD 2015-21-10 (for Model 737 airplanes).

The commenters stated that the three referenced ADs require incorporation of the AWLs that require repetitive inspections of the MOV actuators having part number (P/N) MA30A1001 (Boeing P/N S343T003-66) or MA20A2027 (Boeing P/N S343T003-56). The commenters asserted that since the proposed AD (in the NPRM) would mandate replacement of those part numbers with a new part number, the three ADs should be terminated by the new AD action.

We agree to revise this proposed AD to specify a condition that would terminate the requirements of AD 2015-19-04, AD 2015-21-09, and AD 2015-21-10. We have

determined that the requirements of those ADs can be terminated only after the actions required by this proposed AD are accomplished on all affected airplanes in an operator's fleet. We consider that the above condition is necessary to ensure the safety of mixed airplane configurations in an operator's fleet during the compliance time of this proposed AD.

We also consider that keeping the AWLs mandated by AD 2015-19-04, AD 2015-21-09, or AD 2015-21-10 in the maintenance or inspection program, as applicable, until the actions specified by this proposed AD are accomplished on all affected airplanes in an operator's fleet would cause no extra burden on operators. The AWLs mandated by AD 2015-19-04, AD 2015-21-09, or AD 2015-21-10 require repetitive inspections only for airplanes with MOV actuators having P/N MA30A1001 (Boeing P/N S343T003-66) or MA20A2027 (Boeing P/N S343T003-56) installed at specific locations. Once those part numbers are removed from an airplane and replaced by an acceptable part number, the repetitive inspections specified in the AWLs do not apply to that airplane.

The condition discussed above will ensure adherence to applicable requirements during the compliance time of this proposed AD. We also have determined that an additional means is necessary to protect the airplanes from installation of the discrepant MOV actuators at certain locations. This proposed AD would require removal of an MOV actuator having P/N MA30A1001 (Boeing P/N S343T003-66) or MA20A2027 (Boeing P/N S343T003-56) at specific locations. However, it is possible those MOV actuator part numbers may be re-installed since those part numbers continue to be available and acceptable for installation at locations other than those locations addressed by this proposed AD where failures do not pose a safety concern. To address this concern, we have determined that the incorporation of a new AWL that would prohibit the installation of MOV actuators having P/Ns MA30A1001 (Boeing P/N S343T003-66) and MA20A2027 (Boeing P/N S343T003-56) at specific locations is necessary.

We have specified the requirement to revise the maintenance or inspection program, as applicable, to incorporate a new AWL in paragraph (j) of this proposed AD. This action must be accomplished after the accomplishment of the actions required by paragraphs (g), (h), and (i) of this proposed AD, as applicable, on all affected airplanes in an operator's fleet and before the end of the compliance time of this proposed AD. Other than the parts installation prohibition, no maintenance action is associated with the new AWL. We have also added paragraph (m) in this proposed AD to specify that incorporation of the applicable AWL into the maintenance or inspection program, as applicable, would terminate certain requirements of AD 2015-19-04, AD 2015-21-09, and AD 2015-21-10. **We have moved the content of paragraph (m) of this proposed AD (in the NPRM) to paragraph (p) of this proposed AD.**

Request to Identify Acceptable Replacement MOV Actuator Part Numbers

ANA, Boeing, DAL, DHL Express (DHL), FedEx, and UAL requested that we revise paragraphs (h)(2) and (h)(3) of the proposed AD (in the NPRM) to add MOV actuators having P/Ns AV-31-1, MA11A1265, and MA11A1265-1 (Boeing P/N S343T003-111, S343T003-14, and S343T003-41) as acceptable replacements. The commenters stated that the service information specified in paragraphs (h)(2) and (h)(3) of the proposed AD (in the NPRM) identifies these MOV actuators as acceptable replacements.

We agree with the commenters' request to identify additional MOV actuator part numbers that are acceptable to be used as replacement parts, with the following clarification. For Model 757 airplanes, MOV actuator P/N MA11A1265 (Boeing P/N S343T003-14) is acceptable as installed on the delivered airplanes, but that part number is not allowed to be used as a replacement for other part numbers as instructed in the service information specified in this proposed AD. The use of MOV actuator P/N MA11A1265 (Boeing P/N S343T003-14) to replace other part numbers is allowed for

Model 767 airplanes, but not for Model 757 airplanes. We have revised paragraphs (h)(2) and (h)(3) of this proposed AD accordingly.

Request to Specify Differences Between Proposed Requirements and Service Information

DAL noted that the NPRM referred to “Differences Between this Proposed AD and the Service Information,” but such a section was not in the NPRM. DAL requested that we add a section that discusses the differences between the proposed AD (in the NPRM) and the service information specified in the NPRM. DAL explained one key difference: the alternative acceptable MOV actuator part numbers that are specified in the service information for Model 757 and Model 767 airplanes are not specified in the proposed AD.

We partially agree with DAL’s request. The NPRM inadvertently referred to an unnecessary section that was not included in the NPRM. Furthermore, we did not intend to differ with the service information in regards to the additional MOV actuator part numbers specified in the service information for Model 757 and Model 767 airplanes. As stated previously, we have revised paragraphs (h)(2) and (h)(3) of this proposed AD to allow the additional part numbers.

Request to Reduce Compliance Time

Air Line Pilots Association, International (ALPA) stated that operators have had ample time to prepare scheduling and maintenance activities to address the safety concern in a more efficient time frame than the proposed compliance time of 8 years.

We infer that ALPA wants us to reduce the compliance time, however, they did not identify a proposed compliance time. We have evaluated the level of safety and also the mitigation provided by the airworthiness limitations mandated by AD 2015-19-04, AD 2015-21-09, and AD 2015-21-10. We have determined that the 8-year compliance

time is adequate to address the identified unsafe condition. We have not changed this proposed AD regarding this issue.

Request to Permit MOV Actuator Part Numbers Developed in the Future

SWA requested that we revise paragraph (h)(1) of the proposed AD (in the NPRM) to permit MOV actuators having part numbers approved in the future. SWA stated that this would reduce requests for approval of an alternative method of compliance (AMOC).

We disagree with SWA's request. Paragraphs (h)(1), (h)(2), and (h)(3) of the proposed AD (in the NPRM) did not allow the installation of new MOV actuator part numbers that could be made available in the future. During the installation of the MOV actuator, it is critical to ensure that the MOV actuator is properly bonded to the structure to prevent the development of an ignition source inside the fuel tank due to fault current or lightning strike. To ensure proper installation of a future MOV actuator part number, we would have to require in the AD that a future MOV actuator part number would be installed in accordance with applicable installation instructions. Since applicable installation instructions for a future MOV actuator part number do not exist, and we cannot incorporate instructions which do not exist in an AD, we cannot allow the installation of future MOV actuator part numbers in the proposed AD. However, operators may request an AMOC in accordance with paragraph (o) of this proposed AD to allow installation of MOV actuators approved in the future. We have made no further change to paragraphs (h)(1), (h)(2), and (h)(3) of this proposed AD in this regard.

Request to Use Serviceable Parts

DAL requested that we allow installation of serviceable parts as well as new parts. DAL stated that the service information specifies only new parts.

We agree with DAL's request. The installation of serviceable parts meets the intent of the AD and addresses the unsafe condition. We have revised paragraphs (h)(1),

(h)(2), and (h)(3) of this proposed AD to specify that installation of serviceable parts is acceptable.

Request to Revise Parts Installation Prohibition

ANA and UAL requested that we revise paragraph (j) of the proposed AD (in the NPRM) by adding alternative MOV actuator P/Ns AV-31-1, MA11A1265, and MA11A1265-1 (Boeing P/N S343T003-111, S343T003-14, and S343T003-41, respectively), if those alternative part numbers are allowed under paragraphs (h)(2) and (h)(3) of the proposed AD (in the NPRM). ANA also suggested changing the wording “fuel shutoff valves” to “left and right engine fuel shutoff valves” in paragraph (j) of the proposed AD (in the NPRM) to eliminate ambiguity, since Model 767 airplanes have several fuel shutoff valves. The commenters stated that if the alternative part numbers are allowed for installation under paragraphs (h)(2) and (h)(3) of the proposed AD (in the NPRM), paragraph (j) of the proposed AD (in the NPRM) should prohibit the replacement of those alternative part numbers with MOV actuators having P/N MA30A1001 (Boeing P/N S343T003-66) or MA20A2027 (Boeing P/N S343T003-56).

We agree with the commenters’ requests. Those alternative MOV actuators are acceptable for Model 757 and Model 767 airplanes and should not be replaced by MOV actuators having P/N MA30A1001 (Boeing P/N S343T003-66) or MA20A2027 (Boeing P/N S343T003-56) after the effective date of the AD. The parts installation prohibition specified in paragraph (j) of proposed AD (in the NPRM) corresponds with the parts installation prohibitions specified in paragraphs (l)(1) through (l)(4) of this proposed AD, which identify affected part numbers for the airplanes identified in those paragraphs. The parts installation prohibition for Model 757 and Model 767 airplanes is specified in paragraphs (l)(2) and (l)(3) of this proposed AD, and additional MOV actuator part numbers are identified in those paragraphs as requested by the commenters. We also

added “for the left engine and right engine fuel shutoff valves” in paragraphs (l)(1) through (l)(4) of this proposed AD.

Request to Refer to Previously Released Service Information

Boeing requested that we revise the proposed AD (in the NPRM) to refer to previously released service information that provides instructions to replace a specific older MOV actuator part number. Boeing stated that note 2 to paragraph (h)(2) of the proposed AD (in the NPRM) informs an operator that it can use Boeing Special Attention Service Bulletin 757-28-0138, dated May 18, 2016, to replace MOV actuators having P/N MA20A1001-1 (Boeing P/N S343T003-39). Boeing explained that Boeing Alert Service Bulletin 757-28-0088, dated January 25, 2007, which has been mandated by AD 2008-06-03, Amendment 39-15415 (73 FR 13081, March 12, 2008) (“AD 2008-06-03”), has instructions to replace MOV actuators having P/N MA20A1001-1 (Boeing P/N S343T003-39) with MOV actuators having P/N MA30A1001 (Boeing P/N S343T003-66) or MA20A2027 (Boeing P/N S343T003-56). Boeing stated that the previously released service bulletins are the type design to make the part change and should be referenced.

We do not agree with Boeing’s request to add a reference to Boeing Alert Service Bulletin 757-28A0088, dated January 25, 2007, or Boeing Alert Service Bulletin 737-28A1207, dated February 15, 2007, both of which are mandated by AD 2008-06-03; or Boeing Alert Service Bulletin 767-28A0090, dated July 3, 2008, which is mandated by AD 2009-22-13, Amendment 39-16066 (74 FR 55755, October 29, 2009). We infer that Boeing was expressing its concern that if an MOV actuator having P/N MA20A1001-1 (Boeing P/N S343T003-39) is found, that part number must be replaced by an MOV actuator having P/N MA30A1001 (Boeing P/N S343T003-66) or MA20A2027 (Boeing P/N S343T003-56) in accordance with those previously released service bulletins as an approved change to the type design. Then, an MOV actuator having P/N MA30A1001

(Boeing P/N S343T003-66) or MA20A2027 (Boeing P/N S343T003-56) must be replaced by an MOV actuator having an acceptable part number in accordance with the service information mandated by this proposed AD as an approved change to the type design.

We consider it unnecessary to add a reference to Boeing Alert Service Bulletin 757-28A0088, dated January 25, 2007; Boeing Alert Service Bulletin 737-28A1207, dated February 15, 2007; or Boeing Alert Service Bulletin 767-8A0090, dated July 3, 2008. The type design change provided by the previously released service information discussed above is addressed under AD 2008-06-03 and AD 2009-22-13, and incorporation of that type design change should have been completed for airplanes affected by those two ADs. In addition, this proposed AD covers the airplanes affected by AD 2008-06-03 and AD 2009-22-13 as well as those that are not. The notes to paragraphs (h)(1) and (h)(2) of the proposed AD (in the NPRM) were intended to clarify that operators can use service bulletins mandated by paragraphs (h)(1) and (h)(2) of this proposed AD to remove MOV actuators having P/N MA20A1001-1 (Boeing P/N S343T003-39) and replace that part number with acceptable MOV actuator part numbers since those service bulletins do not specifically address removal of MOV actuators having P/N MA20A1001-1 (Boeing P/N S343T003-39). The service information mandated by paragraph (h)(3) of this proposed AD for Model 767 airplanes addresses removal of MOV actuators having P/N MA20A1001-1 (Boeing P/N S343T003-39). We have revised this proposed AD by including the text from the notes to paragraphs (h)(1), (h)(2), and (h)(3) of the proposed AD (in the NPRM) in the regulatory text of their respective paragraphs in this proposed AD.

Request for Clarification Regarding Certain MOV Actuator Part Number Removal

DAL requested that we clarify whether the proposed AD (in the NPRM) would require removal of an MOV actuator having P/N MA20A1001-1 (Boeing P/N

S343T003-39). DAL stated that the notes to paragraphs (h)(1), (h)(2), and (h)(3) of the proposed AD (in the NPRM) mention removal of MOV actuators having P/N MA20A1001-1 (Boeing P/N S343T003-39), but removal would not be mandated in the proposed AD (in the NPRM).

We agree that clarification is necessary. Removal of MOV actuators having P/N MA20A1001-1 (Boeing P/N S343T003-39) has been mandated by AD 2008-06-03 for certain Model 737 and Model 757 airplanes and by AD 2009-22-13 for certain Model 767 airplanes. Those ADs did not cover airplanes delivered with a later MOV actuator part number. However, for those airplanes not affected by the earlier ADs, the FAA discovered the potential for operators to install MOV actuators having P/N MA20A1001-1 (Boeing P/N 343T003-39) since there was no obvious prohibition of such installation, other than the manufacturer's proprietary drawings that would prohibit the installation. To address this issue, we issued AD 2016-04-20, Amendment 39-18414 (81 FR 10460, March 1, 2016) ("AD 2016-04-20"), to prohibit the installation of MOV actuators having P/N MA20A1001-1 (Boeing P/N S343T003-39) on all affected models including future delivery airplanes. For airplanes affected by AD 2008-06-03 or AD 2009-22-13, we consider that it is unlikely to find MOV actuators having P/N MA20A1001-1 (Boeing P/N S343T003-39) installed, since such an installation would violate the AD requirements. For airplanes not affected by those earlier ADs, there is a chance to find that part number installed. In such a case, the service information specified in paragraph (h)(1), (h)(2), or (h)(3) of this proposed AD may be used to remove an MOV actuator having P/N MA20A1001-1 (Boeing P/N S343T003-39) and replace it with an acceptable MOV actuator part number. We have revised paragraph (h) of this proposed AD to clarify the use of that service information relative to the removal of MOV actuators with P/N MA20A1001-1 (Boeing P/N S343T003-39). No other changes were made to this proposed AD regarding this issue.

Request for Part Number Clarification

SunExpress Airlines (SXS) stated that paragraph (h) of AD 2016-04-20 requires the replacement of an MOV actuator having P/N MA20A1001-1 (Boeing P/N S343T003-39) with a different serviceable, FAA-approved MOV actuator. SXS asserted that this requirement would conflict with paragraph (h) of the proposed AD (in the NPRM) since MOV actuators having P/N MA30A1001 (Boeing P/N S343T003-66) or MA20A2027 (Boeing P/N S343T003-56) are required to be removed by paragraph (h) of the proposed AD (in the NPRM) while those part numbers could be allowed for installation under paragraph (h) of AD 2016-04-20.

We infer that SXS is requesting part number clarification. There is no conflict between paragraph (h) of AD 2016-04-20 and paragraph (h) of this proposed AD. Paragraph (h) of AD 2016-04-20 requires removal of MOV actuators having P/N MA20A1001-1 (Boeing P/N S343T003-39). Paragraph (h) of this proposed AD would require removal of MOV actuators having P/N MA20A1001 (Boeing P/N S343T003-66) or MA20A2027 (Boeing P/N S343T003-56). The operators would comply with both paragraph (h) of AD 2016-04-20 and paragraph (h) of this proposed AD by removing MOV actuators having P/N MA20A1001-1 (Boeing P/N S343T003-39), MA30A1001 (Boeing P/N S343T003-66), and MA20A2027 (Boeing P/N S343T003-56), and replacing those part numbers with an acceptable MOV actuator part number, such as P/N MA30A1017 (Boeing P/N S343T003-76).

We agree that AD 2016-04-20 does not specifically prohibit the installation of MOV actuators having P/N MA30A1001 or P/N MA20A2027. This proposed AD includes more specific provisions that would prohibit the installation of certain MOV actuators, including those having P/N MA30A1001 and P/N MA20A2027, in place of certain other MOV actuators. While there is no conflict between the requirements in this

proposed AD and AD 2016-04-20, we acknowledge that this proposed AD includes those more specific provisions. We have not changed this proposed AD regarding this issue.

Request to Mandate a Fuel Leak Check

UAL suggested that we revise the proposed AD (in the NPRM) to mandate a fuel leak check of the engine fuel shutoff valves per the applicable aircraft maintenance manual (AMM) during the modification specified in paragraphs (h)(1), (h)(2), and (h)(3) of the proposed AD (in the NPRM).

We do not agree with UAL's request. We consider that operators would perform pertinent functional or operational checks recommended in the AMM during the modification specified in paragraphs (h)(1), (h)(2), and (h)(3) of this proposed AD, as operators would typically perform during maintenance activities. We consider that proper installation would be ensured even if a fuel leak check of the engine fuel shutoff valves would not be specifically mandated by this proposed AD. We have not changed this proposed AD regarding this issue.

Request to Clarify Compliance Time in Paragraph (i)(1) of the Proposed AD

SWA requested that we clarify the initial compliance time specified under paragraph (i)(1) of the proposed AD (in the NPRM): 6 years from "the previous" inspection.

We agree to provide clarification, as well as a change to paragraph (i)(1) of this proposed AD. The initial compliance time (in the NPRM) was based on the assumption that the inspection specified in AWL No. 28-AWL-24 for Model 737-600, -700, -700C, -800, -900, and -900ER airplanes would have been accomplished at least once on all affected airplanes before the effective date of the AD.

However, we determined this assumption to be incorrect. Incorporation of AWL No. 28-AWL-24 is mandated by paragraph (h)(1) of AD 2008-06-03. This action is required to be done concurrently with the actions specified in paragraph (g) of AD

2008-06-03. The actions required by paragraphs (g) and (h)(1) of AD 2008-06-03 should have been accomplished on all affected airplanes before April 16, 2013. But the inspection specified in AWL No. 28-AWL-24 is not due until six years after the accomplishment of Boeing Alert Service Bulletin 737-28A1207, dated February 15, 2007, as mandated by paragraph (g) of AD 2008-06-03, or Boeing Service Bulletin 737-28A1207, Revision 1, dated April 19, 2010, which was approved as an AMOC to paragraph (g) of AD 2008-06-03. Therefore, accomplishment of the inspection specified in AWL No. 28-AWL-24 may not occur on all affected airplanes prior to April 16, 2019, which is six years after all affected airplanes would had to have accomplished the actions of AD 2008-06-03, as discussed above. Thus, a “previous inspection” may not have occurred on certain affected airplanes.

We have therefore revised paragraph (i)(1) of this proposed AD to specify that the initial compliance time for accomplishing the actions required by AWL No. 28-AWL-24 is within 6 years since the most recent inspection was performed in accordance with AWL No. 28-AWL-24, or within 6 years since the accomplishment of the actions specified in Boeing Alert Service Bulletin 737-28A1207, dated February 15, 2007, whichever occurs later. We have revised paragraph (i)(2) of this proposed AD in a similar manner to address the same issue associated with AWL No. 28-AWL-25 for Model 757 airplanes.

Request to Delete 30-Day Compliance Time in Paragraph (i)(1) of the Proposed AD

EASA suggested that we delete the grace period (“or within 30 days after the effective date of this AD, whichever is later”) from paragraph (i)(1) of the proposed AD (in the NPRM). EASA stated that this compliance time is unnecessary since a time “prior to or concurrently with the actions required by paragraph (h)(1)” will always be later than “within 30 days” after the effective date. EASA also noted that the 30-day compliance time does not appear in paragraphs (i)(2) and (i)(3) of the proposed AD (in the NPRM).

We do not agree with EASA's request. When we approved Boeing Service Bulletin 737-28-1314, dated November 17, 2014, which is referenced in paragraphs (g)(1) and (h)(1) of this proposed AD, we did not require incorporation of applicable AWLs into the maintenance or inspection program as part of the service information approval. Therefore, operators who have already accomplished Boeing Service Bulletin 737-28-1314, dated November 17, 2014, may not have incorporated applicable AWLs that are provided in Section 9 of the Maintenance Planning Data (MPD) Document or Special Compliance Items and Airworthiness Limitations (SCI/AWL) document at the revision levels specified in paragraph (i)(1) or (n)(3) of this proposed AD (paragraph (i)(1) or (k)(2), respectively, of the proposed AD (in the NPRM)). For such operators, paragraph (i)(1) of this proposed AD provides a grace period of 30 days for incorporation of applicable AWLs into their maintenance or inspection program, as applicable. When we approved Boeing Special Attention Service Bulletin 757-28-0138, dated May 18, 2016, and Revision 1, dated June 19, 2017, and Boeing Service Bulletin 767-28-0115, dated September 10, 2015, and Revision 1, dated June 2, 2016, we required incorporation of applicable AWLs as part of AMOC approval for AD 2008-06-03 (Model 757) and AD 2009-22-13 (Model 767). This requirement is specified in the Approval section of those service bulletins. Therefore, any operator who has accomplished any of those service bulletins prior to the effective date of the AD should have already incorporated applicable AWLs into their maintenance or inspection program, and it is unnecessary to have a grace period in paragraphs (i)(2) and (i)(3) of this proposed AD. We have not changed this proposed AD regarding this issue.

Request to Use Later-approved Service Information

ANA requested that we revise paragraph (i) of the proposed AD (in the NPRM) to allow operators to use a later revision of the Airworthiness Limitations section of the

Instructions for Continued Airworthiness: Section 9 of the Boeing Maintenance Planning Data (MPD) Document or Boeing SCI/AWL document.

We do not agree with ANA's request. We cannot use the phrase "or later FAA-approved revisions," in an AD when referring to the service document because doing so violates Office of the Federal Register (OFR) regulations for approval of materials incorporated by reference (see 1 CFR 51.1(f)). We are required to either publish the service document contents as part of the actual (regulatory) AD language; or submit the service document to the OFR for approval as referenced material, in which case we may only refer to such material in the text of an AD. The AD may refer to the service document only if the OFR approved it for incorporation by reference. To allow operators to use later revisions of the referenced document (issued after publication of the AD), either we must revise this proposed AD to refer to specific later revisions, or operators must request approval to use later revisions as an AMOC to this AD under the provisions of paragraph (o) of this proposed AD. We have not changed this proposed AD regarding this issue.

Request to Limit Applicability

DAL, Solaseed Air, and SWA requested that we clarify paragraph (i)(1) of the proposed AD (in the NPRM), or that we revise that paragraph to limit the affected airplanes. The commenters stated that AWL No. 28-AWL-24, specified under paragraph (i)(1)(iii) of the proposed AD (in the NPRM), is limited to line numbers 1 through 1980 and 1982, but paragraph (i)(1) of the proposed AD (in the NPRM) would require incorporation of this specific AWL for all airplanes identified in paragraph (c)(1) of the proposed AD (in the NPRM). SWA also stated that the effectivity of AWL No. 28-AWL-22 is defined by MOV actuator part numbers.

We agree that clarification is necessary. Paragraph (i) of this proposed AD would not require compliance with the AWLs specified in that paragraph. Instead, paragraph (i)

of this proposed AD would require the operators to revise their maintenance or inspection program, as applicable, by incorporating those AWLs. Once the AWLs are incorporated into the maintenance or inspection program, compliance with the AWLs is required by 14 CFR 43.16 and 91.403(c). The effectivity of each AWL is specified in the Applicability section of the AWL. AWL No. 28-AWL-24, required by paragraph (i)(1)(iii) of this proposed AD, applies to line numbers 1 through 1980 and 1982. For any airplane outside this applicability, there is no maintenance action associated with this specific AWL. Therefore, we consider that incorporation of AWL No. 28-AWL-24 as specified by paragraph (i)(1)(iii) of this proposed AD does not impose an extra burden on operators. Furthermore, incorporation of AWL No. 28-AWL-24 would invoke appropriate maintenance actions if an operator acquires an airplane in the future that falls under the effectivity of that AWL. Because of those reasons, we disagree to limit the airplanes affected by paragraph (i)(1) of this proposed AD.

Regarding AWL No. 28-AWL-22 mentioned by SWA, the AWL applies to all Model 737-600, -700, -700C, -800, -900, and -900ER series airplanes, but the conditions specified in this AWL must be met by the MOV actuator part numbers specified in the applicability note. For the same rationale as noted above, we have not changed this proposed AD regarding this issue.

Request for Part Intermix Credit

SXS requested that we add credit for intermixed part usage until the AD compliance due date. SXS stated that within the 8-year compliance time, the new MOV actuators may be installed at affected locations while the MOV actuators that are to be removed remain installed at other affected locations.

We infer that SXS is requesting us to clarify the intermixed part usage during the AD compliance time. We agree to provide clarification regarding this matter. Operators may install acceptable MOV actuators having part numbers specified in paragraph (h) of

this proposed AD at any affected locations while keeping MOV actuators having P/N MA30A1001 (Boeing P/N S343T003-66) or MA20A2027 (Boeing P/N S343T003-56) installed at other affected locations during the AD compliance time. However, for airplanes with this intermixed part configuration, credit is not allowed for compliance with paragraph (h) of this proposed AD. Credit for compliance with paragraph (h) of this proposed AD can be taken only after the installation of acceptable MOV actuator part numbers at all affected locations specified in paragraph (h) of this proposed AD. Furthermore, once an acceptable MOV actuator part number is installed at any affected location, paragraph (l) of this proposed AD would prohibit the replacement of that MOV actuator part number with an MOV actuator having P/N MA30A1001 (Boeing P/N S343T003-66) or MA20A2027 (Boeing P/N S343T003-56). We have not changed this proposed AD regarding this issue.

Request to Specify Earlier Service Information and New Service Information

Boeing requested that we revise paragraph (k)(2) of the proposed AD (in the NPRM) to refer to all previously released MPD Documents and SCIs that include the AWLs listed in paragraph (i)(1) of the proposed AD (in the NPRM). The commenter stated that the current list misses the most recent SCI/AWL revision, Revision September 2016. The commenter also stated that a new SCI/AWL revision is in work and should be referenced in the AD.

We partially agree with Boeing's requests. Revision September 2016 was the latest revision at the time the NPRM was published. Therefore, it was identified under paragraphs (i)(1)(i), (i)(1)(ii), and (i)(1)(iii), instead of paragraph (k)(2), of the proposed AD (in the NPRM). Paragraph (k)(2) of the proposed AD (in the NPRM) identified all acceptable earlier revisions at the time the NPRM was published.

Since the publication of the NPRM, Boeing released a new SCI/AWL revision: Boeing 737-600/700/700C/800/900/900ER Special Compliance Items/Airworthiness

Limitations, D626A001-9-04, Revision January 2017. We have revised paragraphs (i)(1)(i), (i)(1)(ii), and (i)(1)(iii) of this proposed AD to identify this latest revision, and provided credit for Boeing 737-600/700/700C/800/900/900ER Special Compliance Items/Airworthiness Limitations, D626A001-9-04, Revision September 2016, in paragraph (n)(3) of this proposed AD (which was paragraph (k)(2) of the proposed AD (in the NPRM)).

Request to Revise Paragraph References

UAL requested that we revise paragraph (k)(4) of the proposed AD (in the NPRM) to refer to paragraph (i)(3)(i) of the proposed AD (in the NPRM), instead of paragraph (i)(3) of the proposed AD (in the NPRM). UAL also suggested that we revise paragraph (k)(5) of the proposed AD (in the NPRM) to add credit for the revisions of the SCI/AWL document that are identified in paragraph (k)(4) of the proposed AD (in the NPRM).

We do not agree with UAL's requests. Paragraph (n)(5) of this proposed AD (which was paragraph (k)(4) in the proposed AD (in the NPRM)) refers to paragraph (i)(3) of this proposed AD, which includes paragraphs (i)(3)(i) and (i)(3)(ii) of this proposed AD. The revisions of the SCI/AWL document that the commenter requested to be added under paragraph (n)(6) of this proposed AD (which was paragraph (k)(5) in the proposed AD (in the NPRM)) are already identified in paragraph (n)(5) of this proposed AD as credit for the AWL identified in paragraph (i)(3)(ii) of this proposed AD. Paragraph (n)(6) of this proposed AD identifies an additional revision of the SCI/AWL document that is acceptable for the AWL required by paragraph (i)(3)(ii) of this proposed AD. We have not changed this proposed AD regarding this issue.

Effect of Winglets on Accomplishment of the Proposed Actions

Aviation Partners Boeing stated that the installation of winglets per Supplemental Type Certificate (STC) ST00830SE, ST01518SE, or ST01920SE does not affect the accomplishment of the manufacturer's service instructions.

We agree that STC ST00830SE, ST01518SE, or ST01920SE does not affect the accomplishment of the manufacturer's service instructions. Therefore, the installation of STC ST00830SE, ST01518SE, or ST01920SE does not affect the ability to accomplish the actions that would be required by this proposed AD. We have not changed this proposed AD regarding this issue.

Related Service Information under 1 CFR part 51

We reviewed the following service information.

- Boeing Service Bulletin 737-28-1314, dated November 17, 2014, describes procedures for installing new MOV actuators of the fuel shutoff valves for the left and right engines on Model 737-600, -700, -700C, -800, -900, and -900ER series airplanes.

- Boeing 737-600/700/700C/800/900/900ER Special Compliance Items/Airworthiness Limitations, D626A001-9-04, Revision January 2017, describes AWLs for fuel tank ignition prevention on Model 737-600, -700, -700C, -800, -900, and -900ER series airplanes.

- Boeing Special Attention Service Bulletin 757-28-0138, Revision 1, dated June 19, 2017, describes procedures for installing new MOV actuators of the fuel shutoff valves for the left and right engines, and of the APU fuel shutoff valve, on Model 757 airplanes.

- Boeing 757 Maintenance Planning Data (MPD) Document, Section 9, Airworthiness Limitations (AWLs) and Certification Maintenance Requirements (CMRs), D622N001-9, Revision February 2017, describes AWLs for fuel tank ignition prevention on Model 757 airplanes.

- Boeing Service Bulletin 767-28-0115, Revision 1, dated June 2, 2016, describes procedures for installing new MOV actuators of the fuel shutoff valves for the left and right engines, and of the APU fuel shutoff valve, on Model 767 airplanes.

- Boeing 767 Special Compliance Items/Airworthiness Limitations, D622T001-9-04, Revision June 2016, describes AWLs for fuel tank ignition prevention on Model 767 airplanes.

This service information is reasonably available because the interested parties have access to it through their normal course of business or by the means identified in the ADDRESSES section.

FAA’s Determination

We are proposing this AD because we evaluated all the relevant information and determined the unsafe condition described previously is likely to exist or develop in other products of the same type designs. Certain changes described above expand the scope of the NPRM. As a result, we have determined that it is necessary to reopen the comment period to provide additional opportunity for the public to comment on this SNPRM.

Proposed Requirements of this Proposed AD

This proposed AD would require accomplishing the actions specified in the service information described previously.

This proposed AD would also provide terminating action for all certain actions required by AD 2015-19-04, AD 2015-21-09, and AD 2015-21-10, as explained above, under “Requests to Terminate Other ADs.”

This proposed AD would also require revisions to certain operator maintenance documents to include new actions (e.g., inspections). Compliance with these actions would be required by 14 CFR 43.16 and 91.403(c). For airplanes that have been previously modified, altered, or repaired in the areas addressed by this proposed AD, the operator may not be able to accomplish the actions described in the revisions. In this

situation, to comply with 14 CFR 91.403(c), the operator must request approval for an alternative method of compliance according to paragraph (o) of this proposed AD. The request should include a description of changes to the required inspections that will ensure the continued operational safety of the airplane.

Costs of Compliance

We estimate that this proposed AD affects 2,574 airplanes of U.S. registry. We estimate the following costs to comply with this proposed AD:

Estimated costs

Action	Labor cost	Parts cost	Cost per product	Cost on U.S. operators
Inspection and replacement Model 737 (1,440 airplanes)	Up to 6 work-hours X \$85 per hour = Up to \$510	Up to \$12,000	Up to \$12,510	Up to \$18,014,400
Inspection and replacement Model 757 (675 airplanes)	Up to 9 work-hours X \$85 per hour = Up to \$765	Up to \$18,000	Up to \$18,765	Up to \$12,666,375
Inspection and replacement Model 767 (442 airplanes)	Up to 9 work-hours X \$85 per hour = Up to \$765	Up to \$18,000	Up to \$18,765	Up to \$8,294,130
Maintenance or inspection program revision (2,574 airplanes)	1 work-hour X \$85 per hour = \$85	\$0	\$85	\$218,790

Authority for this Rulemaking

Title 49 of the United States Code specifies the FAA’s authority to issue rules on aviation safety. Subtitle I, section 106, describes the authority of the FAA Administrator. “Subtitle VII: Aviation Programs” describes in more detail the scope of the Agency’s authority.

We are issuing this rulemaking under the authority described in Subtitle VII, Part A, Subpart III, Section 44701: “General requirements.” Under that section, Congress

charges the FAA with promoting safe flight of civil aircraft in air commerce by prescribing regulations for practices, methods, and procedures the Administrator finds necessary for safety in air commerce. This regulation is within the scope of that authority because it addresses an unsafe condition that is likely to exist or develop on products identified in this rulemaking action.

This proposed AD is issued in accordance with authority delegated by the Executive Director, Aircraft Certification Service, as authorized by FAA Order 8000.51C. In accordance with that order, issuance of ADs is normally a function of the Compliance and Airworthiness Division, but during this transition period, the Executive Director has delegated the authority to issue ADs applicable to transport category airplanes to the Director of the System Oversight Division.

Regulatory Findings

We determined that this proposed AD would not have federalism implications under Executive Order 13132. This proposed AD would not have a substantial direct effect on the States, on the relationship between the national Government and the States, or on the distribution of power and responsibilities among the various levels of government.

For the reasons discussed above, I certify this proposed regulation:

- (1) Is not a “significant regulatory action” under Executive Order 12866,
- (2) Is not a “significant rule” under the DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979),
- (3) Will not affect intrastate aviation in Alaska, and
- (4) Will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

List of Subjects in 14 CFR Part 39

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

The Proposed Amendment

Accordingly, under the authority delegated to me by the Administrator, the FAA proposes to amend 14 CFR part 39 as follows:

PART 39 - AIRWORTHINESS DIRECTIVES

1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

§ 39.13 [Amended]

2. The FAA amends § 39.13 by adding the following new airworthiness directive (AD):

The Boeing Company: Docket No. FAA-2017-0127; Product Identifier 2016-NM-161-AD.

(a) Comments Due Date

We must receive comments by [INSERT DATE 45 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

(b) Affected ADs

This AD affects AD 2015-21-09, Amendment 39-18302 (80 FR 65121, October 26, 2015) (“AD 2015-21-09”); AD 2015-19-04, Amendment 39-18267, (80 FR 55505, September 16, 2015) (“AD 2015-19-04”); and AD 2015-21-10, Amendment 39-18303 (80 FR 65130, October 26, 2015) (“AD 2015-21-10”).

(c) Applicability

This AD applies to all The Boeing Company airplanes, certificated in any category, identified in paragraphs (c)(1), (c)(2), and (c)(3) of this AD.

(1) Model 737 series airplanes, excluding Model 737-100, -200, -200C, -300, -400, and -500 series airplanes.

(2) Model 757-200, -200PF, -200CB, and -300 series airplanes.

(3) Model 767-200, -300, -300F, and -400ER series airplanes.

(d) Subject

Air Transport Association (ATA) of America Code 28; Fuel.

(e) Unsafe Condition

This AD was prompted by reports of latently failed motor-operated valve (MOV) actuators of the fuel shutoff valves. We are issuing this AD to prevent a latent failure of the actuator for the engine or auxiliary power unit (APU) fuel shutoff valves, which could result in the inability to shut off fuel to the engine or the APU, and, in case of certain engine or APU fires, could result in structural failure.

(f) Compliance

Comply with this AD within the compliance times specified, unless already done.

(g) Inspection to Determine Part Number (P/N)

(1) For Model 737-600, -700, -700C, -800, -900, and -900ER series airplanes: Within 8 years after the effective date of this AD, do an inspection to determine the part numbers of the MOV actuators of the fuel shutoff valves for the left and right engines, in accordance with the Accomplishment Instructions of Boeing Service Bulletin 737-28-1314, dated November 17, 2014. A review of airplane maintenance records is acceptable in lieu of this inspection if the part number of the MOV actuator at each location can be conclusively determined from that review.

(2) For airplanes identified in paragraphs (c)(2) and (c)(3) of this AD: Within 8 years after the effective date of this AD, do an inspection to determine the part numbers of the MOV actuators of the fuel shutoff valves for the left and right engines, and of the APU fuel shutoff valve, in accordance with the Accomplishment Instructions of Boeing Special Attention Service Bulletin 757-28-0138, Revision 1, dated June 19, 2017 (“SB 757-28-0138 R1”); or Boeing Service Bulletin 767-28-0115, Revision 1, dated June 2, 2016 (“SB 767-28-0115 R1”); as applicable. A review of airplane maintenance records is

acceptable in lieu of this inspection if the part number of the MOV actuator at each location can be conclusively determined from that review.

(h) Replacement

(1) For Model 737-600, -700, -700C, -800, -900, and -900ER series airplanes on which any MOV actuator having P/N MA20A2027 or P/N MA30A1001 (Boeing P/N S343T003-56 or Boeing P/N S343T003-66, respectively), is found during the inspection required by paragraph (g)(1) of this AD: Within 8 years after the effective date of this AD, replace each affected MOV actuator with an MOV actuator having P/N MA30A1017 (Boeing P/N S343T003-76), in accordance with the Accomplishment Instructions of Boeing Service Bulletin 737-28-1314, dated November 17, 2014. Where Boeing Service Bulletin 737-28-1314, dated November 17, 2014, specifies the installation of a new MOV actuator, this AD allows the installation of a new or serviceable MOV actuator. While not required by this AD, the Accomplishment Instructions specified in Boeing Service Bulletin 737-28-1314, dated November 17, 2014, for replacing MOV actuators having Boeing P/N S343T003-66 or Boeing P/N S343T003-56 may be used for replacing MOV actuators having P/N MA20A1001-1 (Boeing P/N S343T003-39).

(2) For airplanes identified in paragraph (c)(2) of this AD on which any MOV actuator having P/N MA20A2027 or P/N MA30A1001 (Boeing P/N S343T003-56 or Boeing P/N S343T003-66, respectively) is found during the inspection required by paragraph (g)(2) of this AD: Within 8 years after the effective date of this AD, replace each affected MOV actuator with an MOV actuator having P/N MA30A1017 (Boeing P/N S343T003-76), P/N AV-31-1 (Boeing P/N S343T003-111), or P/N MA11A1265-1 (Boeing P/N S343T003-41), in accordance with the Accomplishment Instructions of SB 757-28-0138 R1. Where SB 757-28-0138 R1, specifies the installation of a new MOV actuator, this AD allows the installation of a new or serviceable MOV actuator. While not

required by this AD, the Accomplishment Instructions specified in SB 757-28-0138 R1 for replacing MOV actuators having Boeing P/N S343T003-66 or Boeing P/N S343T003-56 may be used for replacing MOV actuators having P/N MA20A1001-1 (Boeing P/N S343T003-39).

(3) For airplanes identified in paragraph (c)(3) of this AD on which any MOV actuator having P/N MA20A2027 (Boeing P/N S343T003-56) or P/N MA30A1001 (Boeing P/N S343T003-66) is found during the inspection required by paragraph (g)(2) of this AD: Within 8 years after the effective date of this AD, replace each affected MOV actuator with an MOV actuator having P/N MA30A1017 (Boeing P/N S343T003-76), P/N AV-31-1 (Boeing P/N S343T003-111), P/N MA11A1265 (Boeing P/N S343T003-14), or P/N MA11A1265-1 (Boeing P/N S343T003-41), in accordance with the Accomplishment Instructions of SB 767-28-0115 R1. Where SB 767-28-0115 R1, specifies the installation of a new MOV actuator, this AD allows the installation of a new or serviceable MOV actuator. While not required by this AD, the Accomplishment Instructions specified in SB 767-28-0115 R1, for replacing MOV actuators having Boeing P/N S343T003-66 or Boeing P/N S343T003-56 may be used for replacing MOV actuators having P/N MA20A1001-1 (Boeing P/N S343T003-39).

(i) Maintenance or Inspection Program Revision

(1) For Model 737-600, -700, -700C, -800, -900, and -900ER series airplanes with an original certificate of airworthiness or original export certificate of airworthiness issued on or before the effective date of this AD: Prior to or concurrently with the actions required by paragraph (h)(1) of this AD or within 30 days after the effective date of this AD, whichever is later, revise the maintenance or inspection program, as applicable, to add the airworthiness limitations (AWLs) specified in paragraphs (i)(1)(i), (i)(1)(ii), and (i)(1)(iii) of this AD. The initial compliance time for accomplishing the actions required by AWL No. 28-AWL-24 is within 6 years since the most recent inspection was

performed in accordance with AWL No. 28-AWL-24, or within 6 years since the actions specified in Boeing Alert Service Bulletin 737-28A1207 were accomplished, whichever is later.

(i) AWL No. 28-AWL-21, MOV Actuator – Lightning and Fault Current Protection Electrical Bond, as specified in Boeing 737-600/700/700C/800/900/900ER Special Compliance Items/Airworthiness Limitations, D626A001-9-04, Revision January 2017.

(ii) AWL No. 28-AWL-22, MOV Actuator – Electrical Design Feature, as specified in Boeing 737-600/700/700C/800/900/900ER Special Compliance Items/Airworthiness Limitations, D626A001-9-04, Revision January 2017.

(iii) AWL No. 28-AWL-24, Valve MOV Actuator – Lightning and Fault Current Protection Electrical Bond, as specified in Boeing 737-600/700/700C/800/900/900ER Special Compliance Items/Airworthiness Limitations, D626A001-9-04, Revision January 2017.

(2) For airplanes identified in paragraph (c)(2) of this AD: Prior to or concurrently with the actions required by paragraph (h)(2) of this AD, revise the maintenance or inspection program, as applicable, to add the AWLs specified in paragraphs (i)(2)(i), (i)(2)(ii), and (i)(2)(iii) of this AD. The initial compliance time for accomplishing the actions required by AWL No. 28-AWL-25 is within 6 years since the most recent inspection was performed in accordance with AWL No. 28-AWL-25, or within 6 years since the actions specified in Boeing Alert Service Bulletin 757-28A0088 were accomplished, whichever is later.

(i) AWL No. 28-AWL-23, Motor Operated Valve (MOV) Actuator – Lightning and Fault Current Protection Electrical Bond, as specified in Boeing 757 Maintenance Planning Data (MPD) Document, Section 9, Airworthiness Limitations (AWLs) and Certification Maintenance Requirements (CMRs), D622N001-9, Revision February 2017.

(ii) AWL No. 28-AWL-24, Motor Operated Valve (MOV) Actuator – Electrical Design Feature, as specified in Boeing 757 Maintenance Planning Data (MPD) Document, Section 9, Airworthiness Limitations (AWLs) and Certification Maintenance Requirements (CMRs), D622N001-9, Revision February 2017.

(iii) AWL No. 28-AWL-25, Motor Operated Valve (MOV) Actuator – Lightning and Fault Current Protection Electrical Bond, as specified in Boeing 757 Maintenance Planning Data (MPD) Document, Section 9, Airworthiness Limitations (AWLs) and Certification Maintenance Requirements (CMRs), D622N001-9, Revision February 2017.

(3) For airplanes identified in paragraph (c)(3) of this AD with an original certificate of airworthiness or original export certificate of airworthiness issued on or before the effective date of this AD: Prior to or concurrently with the actions required by paragraph (h)(3) of this AD, revise the maintenance or inspection program, as applicable, to add the AWLs specified in paragraphs (i)(3)(i) and (i)(3)(ii) of this AD.

(i) AWL No. 28-AWL-23, Motor Operated Valve (MOV) Actuator – Lightning and Fault Current Protection Electrical Bond, as specified in Boeing 767 Special Compliance Items/Airworthiness Limitations, D622T001-9-04, Revision June 2016.

(ii) AWL No. 28-AWL-24, Motor Operated Valve (MOV) Actuator – Electrical Design Feature, as specified in Boeing 767 Special Compliance Items/Airworthiness Limitations, D622T001-9-04, Revision June 2016.

(j) Maintenance or Inspection Program Revision for Parts Installation Prohibition

(1) For Model 737-600, -700, -700C, -800, -900, and -900ER series airplanes: After accomplishing the actions required by paragraphs (g)(1), (h)(1), and (i)(1) of this AD, as applicable, on all airplanes in an operator's fleet, and within 8 years after the effective date of the AD, revise the maintenance or inspection program, as applicable, by incorporating the AWL specified in figure 1 to paragraph (j)(1) of this AD.

Figure 1 to Paragraph (j)(1) of this AD –
AWL for Model 737-600, -700, -700C, -800, -900, and -900ER series airplanes

AWL No.	Applicability	Description
28-AWL-MOVA	All	<p>Motor Operated Valve (MOV) Actuator - Prohibition of Installation of Specific Part Numbers</p> <p>Installation of MOV actuator part number (P/N) MA30A1001 (Boeing P/N S343T003-66) and P/N MA20A2027 (Boeing P/N S343T003-56) is prohibited at the following positions:</p> <ol style="list-style-type: none"> 1. Left engine fuel shutoff spar valve position 2. Right engine fuel shutoff spar valve position

(2) For airplanes identified in paragraph (c)(2) of this AD: After accomplishing the actions required by paragraphs (g)(2), (h)(2), and (i)(2) of this AD, as applicable, on all airplanes in an operator's fleet, and within 8 years after the effective date of the AD, revise the maintenance or inspection program, as applicable, by incorporating the AWL specified in figure 2 to paragraph (j)(2) of this AD.

Figure 2 to Paragraph (j)(2) of this AD –
AWL for airplanes identified in paragraph (c)(2) of this AD

AWL No.	Applicability	Description
28-AWL-MOVA	All	<p>Motor Operated Valve (MOV) Actuator - Prohibition of Installation of Specific Part Numbers</p> <p>Installation of MOV actuator part number (P/N) MA30A1001 (Boeing P/N S343T003-66) and P/N MA20A2027 (Boeing P/N S343T003-56) is prohibited at the following positions:</p> <ol style="list-style-type: none"> 1. Left engine fuel shutoff spar valve position 2. Right engine fuel shutoff spar valve position 3. APU fuel shutoff valve position

(3) For airplanes identified in paragraph (c)(3) of this AD: After accomplishing the actions required by paragraphs (g)(2), (h)(3), and (i)(3) of this AD, as applicable, on

all airplanes in an operator's fleet, and within 8 years after the effective date of the AD, revise the maintenance or inspection program, as applicable, by incorporating the AWL specified in figure 3 to paragraph (j)(3) of this AD.

Figure 3 to Paragraph (j)(3) of this AD –
AWL for airplanes identified in paragraph (c)(3) of this AD

AWL No.	Applicability	Description
28-AWL-MOVA	All	<p>Motor Operated Valve (MOV) Actuator - Prohibition of Installation of Specific Part Numbers</p> <p>Installation of MOV actuator part number (P/N) MA30A1001 (Boeing P/N S343T003-66) and P/N MA20A2027 (Boeing P/N S343T003-56) is prohibited at the following positions:</p> <ol style="list-style-type: none"> 1. Left engine fuel shutoff spar valve position 2. Right engine fuel shutoff spar valve position 3. APU fuel shutoff valve position

(4) For airplanes identified in paragraph (c)(1) of this AD, excluding Model 737-600, -700, -700C, -800, -900, and -900ER series airplanes: Within 30 days since the date of issuance of the original standard airworthiness certificate or the date of issuance of the original export certificate of airworthiness, or within 30 days after the effective date of this AD, whichever is later, revise the maintenance or inspection program, as applicable, by incorporating the AWL specified in figure 4 to paragraph (j)(4) of this AD.

Figure 4 to Paragraph (j)(4) of this AD –
AWL for airplanes identified in paragraph (c)(1) of this AD,
excluding Model 737-600, -700, -700C, -800, -900, and -900ER series airplanes

AWL No.	Applicability	Description
28-AWL-MOVA	All	<p>Motor Operated Valve (MOV) Actuator – Prohibition of Installation of Specific Part Numbers</p> <p>Concern: Installation of the following MOV actuator part numbers (P/N) is not part of the airplane type design: P/N MA30A1001 (Boeing P/N S343T003-66), P/N MA20A2027 (Boeing P/N S343T003-56), P/N MA20A1001-1 (Boeing P/N S343T003-39). However, there is a potential for those part numbers to be installed on the airplane using provisions provided in FAA Advisory Circular 120-77 or other means due to their continued availability and use on other Model 737 airplanes. Such an alteration will create unsafe conditions.</p> <ol style="list-style-type: none"> 1. Installation of MOV actuator P/N MA20A1001-1 (Boeing P/N S343T003-39) is prohibited at any location. 2. Installation of MOV actuator part number (P/N) MA30A1001 (Boeing P/N S343T003-66) and P/N MA20A2027 (Boeing P/N S343T003-56) is prohibited at the following positions: <ol style="list-style-type: none"> a. Left engine fuel shutoff spar valve position b. Right engine fuel shutoff spar valve position

(k) No Alternative Actions, Intervals, and Critical Design Configuration Control Limitations (CDCCLs)

(1) After the maintenance or inspection program has been revised as required by paragraph (i) of this AD, no alternative actions (e.g., inspections), intervals, or CDCCLs, may be used unless the actions, intervals, and CDCCLs are approved as an alternative

method of compliance (AMOC) in accordance with the procedures specified in paragraph (o) of this AD.

(2) After the maintenance or inspection program has been revised as required by paragraph (j) of this AD, no alternative actions (e.g., inspections), intervals, or CDCCLs, may be used unless the actions, intervals, and CDCCLs are approved as an alternative method of compliance (AMOC) in accordance with the procedures specified in paragraph (o) of this AD.

(l) Parts Installation Prohibition

(1) For Model 737-600, -700, -700C, -800, -900, and -900ER series airplanes: As of the effective date of this AD, no person may replace an MOV actuator having P/N MA30A1017 (Boeing P/N S343T003-76) with an MOV actuator having P/N MA20A2027 or P/N MA30A1001 (Boeing P/N S343T003-56 or Boeing P/N S343T003-66, respectively) for the left engine and right engine fuel shutoff valves.

(2) For airplanes identified in paragraph (c)(2) of this AD: As of the effective date of this AD, no person may replace an MOV actuator having P/N AV-31-1 (Boeing P/N S343T003-111), P/N MA11A1265 (Boeing P/N S343T003-14), P/N MA11A1265-1 (Boeing P/N S343T003-41), or P/N MA30A1017 (Boeing P/N S343T003-76) with an MOV actuator having P/N MA30A1001 (Boeing P/N S343T003-66) or P/N MA20A2027 (Boeing P/N S343T003-56) for the left engine and right engine fuel shutoff valves and the APU fuel shutoff valve.

(3) For airplanes identified in paragraph (c)(3) of this AD: As of the effective date of this AD, no person may replace an MOV actuator having P/N AV-31-1 (Boeing P/N S343T003-111), P/N MA11A1265 (Boeing P/N S343T003-14), P/N MA11A1265-1 (Boeing P/N S343T003-41), or P/N MA30A1017 (Boeing P/N S343T003-76) with an MOV actuator having P/N MA30A1001 (Boeing P/N S343T003-66) or P/N MA20A2027

(Boeing P/N S343T003-56) for the left engine and right engine fuel shutoff valves and the APU fuel shutoff valve.

(4) For airplanes identified in paragraph (c)(1) of this AD, excluding Model 737-600, -700, -700C, -800, -900, and -900ER series airplanes: As of the effective date of this AD, no person may install an MOV actuator having P/N MA20A1001-1 (Boeing P/N S343T003-39) or replace an MOV actuator with an MOV actuator having P/N MA20A2027 or P/N MA30A1001 (Boeing P/N S343T003-56 or Boeing P/N S343T003-66, respectively) for the left engine and right engine fuel shutoff valves.

(m) Terminating Action

(1) For Model 737-600, -700, -700C, -800, -900, and -900ER series airplanes: Accomplishing the actions required by paragraph (j)(1) of this AD terminates the requirements of paragraph (l)(1) of this AD and all of the requirements of AD 2015-21-10.

(2) For airplanes identified in paragraph (c)(2) of this AD: Accomplishing the action required by paragraph (j)(2) of this AD terminates the requirements of paragraph (l)(2) of this AD and all of the requirements of AD 2015-19-04.

(3) For airplanes identified in paragraph (c)(3) of this AD: Accomplishing the action required by paragraph (j)(3) of this AD terminates the requirements of paragraph (l)(3) of this AD and all of the requirements of AD 2015-21-09.

(4) For airplanes identified in paragraph (c)(1) of this AD, excluding Model 737-600, -700, -700C, -800, -900, and -900ER series airplanes: Accomplishing the action required by paragraph (j)(4) of this AD terminates the requirements of paragraph (l)(4) of this AD.

(n) Credit for Previous Actions

(1) This paragraph provides credit for the actions specified in paragraph (g)(2) or (h)(2) of this AD, as applicable, if those actions were performed before the effective date

of this AD using Boeing Special Attention Service Bulletin 757-28-0138, dated May 18, 2016.

(2) This paragraph provides credit for the actions specified in paragraph (g)(2) or (h)(3) of this AD, as applicable, if those actions were performed before the effective date of this AD using Boeing Service Bulletin 767-28-0115, dated September 10, 2015.

(3) For Model 737-600, -700, -700C, -800, -900, and -900ER series airplanes with an original certificate of airworthiness or original export certificate of airworthiness issued on or before the effective date of this AD, this paragraph provides credit for the actions specified in paragraph (i)(1) of this AD if those actions were performed before the effective date of this AD using Boeing 737-600/700/700C/800/900/900ER Special Compliance Items/Airworthiness Limitations, D626A001-9-04, Revision July 2016, or Revision September 2016; or Boeing 737-600/700/700C/800/900/900ER Maintenance Planning Data (MPD) Document, Section 9, Airworthiness Limitations (AWLs) and Certification Maintenance Requirements (CMRs), D626A001-CMR, Revision October 2014, Revision November 2014, Revision January 2015, or Revision April 2016.

(4) For airplanes identified in paragraph (c)(2) of this AD, this paragraph provides credit for the actions specified in paragraph (i)(2) of this AD if those actions were performed before the effective date of this AD using Boeing 757 Maintenance Planning Data (MPD) Document, Section 9, Airworthiness Limitations (AWLs) and Certification Maintenance Requirements (CMRs), D622N001-9, Revision January 2016, or Revision July 2016.

(5) For airplanes identified in paragraph (c)(3) of this AD with an original certificate of airworthiness or original export certificate of airworthiness issued on or before the effective date of this AD, this paragraph provides credit for the actions specified in paragraph (i)(3) of this AD if those actions were performed before the effective date of this AD using Boeing 767 Special Compliance Items/Airworthiness

Limitations, D622T001-9-04, Revision July 2015, Revision March 2016, Revision May 2016, or Revision May 2016 R1.

(6) For airplanes identified in paragraph (c)(3) of this AD with an original certificate of airworthiness or original export certificate of airworthiness issued on or before the effective date of this AD, this paragraph provides credit for the actions specified in paragraph (i)(3)(ii) of this AD if those actions were performed before the effective date of this AD using Boeing 767 Special Compliance Items/Airworthiness Limitations, D622T001-9-04, Revision October 2014.

(o) Alternative Methods of Compliance (AMOCs)

(1) The Manager, Seattle ACO Branch, FAA, has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19. In accordance with 14 CFR 39.19, send your request to your principal inspector or local Flight Standards District Office, as appropriate. If sending information directly to the manager of the certification office, send it to the attention of the person identified in paragraph (p)(1) of this AD. Information may be emailed to: 9-ANM-Seattle-ACO-AMOC-Requests@faa.gov.

(2) Before using any approved AMOC, notify your appropriate principal inspector, or lacking a principal inspector, the manager of the local flight standards district office/certificate holding district office.

(3) An AMOC that provides an acceptable level of safety may be used for any repair, modification, or alteration required by this AD if it is approved by the Boeing Commercial Airplanes Organization Designation Authorization (ODA) that has been authorized by the Manager, Seattle ACO Branch, to make those findings. To be approved, the repair method, modification deviation, or alteration deviation must meet the certification basis of the airplane, and the approval must specifically refer to this AD.

(4) For service information that contains steps that are labeled as Required for Compliance (RC), the provisions of paragraphs (o)(4)(i) and (o)(4)(ii) of this AD apply.

(i) The steps labeled as RC, including substeps under an RC step and any figures identified in an RC step, must be done to comply with the AD. If a step or substep is labeled “RC Exempt,” then the RC requirement is removed from that step or substep. An AMOC is required for any deviations to RC steps, including substeps and identified figures.

(ii) Steps not labeled as RC may be deviated from using accepted methods in accordance with the operator’s maintenance or inspection program without obtaining approval of an AMOC, provided the RC steps, including substeps and identified figures, can still be done as specified, and the airplane can be put back in an airworthy condition.

(p) Related Information

(1) For more information about this AD, contact Tak Kobayashi, Aerospace Engineer, Propulsion Branch, FAA, Seattle ACO Branch, 2200 South 216th St., Des Moines, WA 98198; phone and fax: 206-231-3553; email: Takahisa.Kobayashi@faa.gov.

(2) For service information identified in this AD, contact Boeing Commercial Airplanes, Attention: Contractual & Data Services (C&DS), 2600 Westminister Blvd., MC 110-SK57, Seal Beach, CA 90740-5600; telephone: 562-797-1717; Internet: <https://www.myboeingfleet.com>. You may view this referenced service information at the FAA, Transport Standards Branch, 2200 South 216th St., Des Moines, WA. For information on the availability of this material at the FAA, call 206-231-3195.

Issued in Renton, Washington, on March 5, 2018.

Michael Kaszycki,
Acting Director,
System Oversight Division,
Aircraft Certification Service

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